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EXAMINER

CHEUNG, WILLIAM K

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

05/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,149	Applicant(s) FREI ET AL.	
	Examiner WILLIAM K. CHEUNG	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-17 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-17 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. The request filed on February 29, 2008 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 10/563,149 is acceptable and a RCE has been established. An action on the RCE follows.
2. In view of the amendment filed February 29, 2008, claims 1-10, 18-19 have been cancelled. Claims 11-17, 20-24 are pending.
3. In view of the amendment filed February 29, 2008, the rejection of Claims 11-17, 20-24 under 35 U.S.C. 112, first paragraph, is withdrawn. Further, the rejection of Claims 11-13, 16-17, 20-24 under 35 U.S.C. 102(b) as being anticipated by Wang (US 6,428,900 B1), is withdrawn. The rejection of Claims 14, 15 under 35 U.S.C. 103(a) as being unpatentable over Wang (US 6,428,900 B1) is withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

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Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 11-17, 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taal et al. (WO 00/61695) (translated in US 6,818,093) in view of Wang (US 6,428,900 B1).

11. (currently amended) An adhesive composition containing
- (a) an elastomeric block copolymer having a diblock content of more than 40% elastomeric block copolymers of the A-B and A-B-A type, wherein the proportion of A-B with respect to the entirety of block copolymers is more than 40%, wherein the A block is a polymer made of monomers selected from the group consisting of styrene and its homologs, α -methylstyrene, 4-substituted styrenes, 4-(4-phenyl-n-butyl) styrene, 4-alkylstyrenes, 4-n-propylstyrene, 4-cyclohexylstyrene, 5-substituted styrenes, 5-alkylstyrenes, 5-tert-butylstyrene, 3,5-disubstituted styrenes, 3,5-dialkylstyrenes, 3,5-diethylstyrene, 3-5 di-n-butylstyrene, 2,4 disubstituted styrenes, 2-ethyl-4-benzylstyrene, 2,4-dialkylstyrenes, 2,4-dimethylstyrenes and vinyltoluene, and wherein the B block is a polymer made of monomers selected from the group consisting of a conjugated, lower aliphatic diene, butadiene, 1,3-pentadiene, isoprene, 2,3-dimehtylbutadiene, 1,3-hexadiene, and fully or partially hydrogenated derivatives thereof;
 - (b) a sulfonated copolyester;
 - (c) if desired, further auxiliary additives.

Regarding claim 11 (line 16), the recitation “if desired” is taken to mean “optional”. Regarding claim 12 (line 7), the recitation “preferably” is taken to mean “optional”.

Taal et al. (translated in US 6,818,093: col. 6, line 37-55; col. 8, Table 1; col. 9, claim 5) disclose working examples comprising most of the ingredients, such as SIS triblock copolymer (Kraton 605), SI diblock copolymer (LVS-1), tackifiers Regalite R10, Regalrez 1018, plasticizers (Shell-Ol 4178), and auxiliary additives such as antioxidant (Irganox 1010) as claimed. Regarding claim 16, the composition as disclosed in Table 1 of Taal et al. clearly indicate that the proportion of A-B of the entirety of block copolymers is not more than 90%.

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Regarding claims 20-21, Taal et al. (col.10, claim 9) clearly disclose a bonding method that involves applying adhesive to the substrate (films or non-wovens) where the substrate has been coated with a dermatologically compatible coating. Since a dermatological coating is used, it would not be difficult to one of ordinary skill in art to recognize and appreciate that the applying the adhesive films or non-wovens onto a skin substrate. Therefore, the examiner believes that the features of claims 20-21 have been met by Taal et al.

TABLE 1

	Comp.	E1	E2	E3	E4	E5	E6	E7
<u>I Components [In % by weight]</u>								
Kraton 605	21	31	11	11	11	11	11	
MBG 275	24	24	24	24	14	24	14	24
MBG 278	36	36	36	36	36	36	36	36
LVS-I		10	28		10	10	10	29
Regalite R 10					10			
Regalrez 1038						10	10	10
Parspol 950				28	18	8	18	
Shell-Oil 4178	18	18						
Irganox 1010	1	1	1	1	1	1	1	1
<u>II Phys. data</u>								
$\eta(150^{\circ}\text{C.})[\text{mPas}]$	3380	780	3155	1510	2270	1435	1137	1400
Ring & ball [$^{\circ}\text{C.}$]	98.9	81.2	95.1	99.7	97.3	88.6	92	67.7
<u>III Adhesion values [N5 cm^{-2}] after storage</u>								
24 h/RT without lotion	3.7*	3.6*	2.2	2.1	2.7*	3.5*	3.1*	4.5*
24 h/RT lotion 1	2.8	3.6	3.6	2.6	5.3*	3.6*	2.5	3.4
24 h/RT lotion 2	1.5	3	4*	1.9	3.4*	3	1.4	3.5
24 h/RT lotion 3	1	2.7	3.5*	1.7	3.3	0.8	3.1	1.7
4 h/40 $^{\circ}\text{C.}$ without lotion	3.9*	4.6*	4.2*	2.3	3.6*	5.1*	3.4*	3.7*
4 h/40 $^{\circ}\text{C.}$ lotion 1	2.3	3.8*	3.5	1.6	4.2*	3.5	3.6*	3.7*
4 h/40 $^{\circ}\text{C.}$ lotion 2	1	2.1	2.9	1.3	3	2.5	0.9	4.5*
4 h/40 $^{\circ}\text{C.}$ lotion 3	1.2	1.9	2.4	0.9	1.8	1.6	2.4	1.1

* = Tearing of material or fibers

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- 40 1) Kraton KX 605 (Shell): SIS block copolymer containing 29% styrene and 17% diblock
 2) MBG 278 (Hercules): aliphatic completely hydrogenated cyclopentadiene resin (hydrocarbon resin)
 45 3) MBG (Hercules): aliphatic, aromatically modified, partly hydrogenated hydrocarbon resin
 4) LVS-I 101 (Shell): styrene/isoprene diblock copolymer containing 13% styrene
 5) Regalite R 10 (Hercules): aliphatic, completely hydrogenated cyclopentadiene resin (hydrocarbon resin)
 50 6) Regalrez 1018 (Hercules): aliphatic, completely hydrogenated cyclopentadiene resin (hydrocarbon resin)
 7) Parapol 950 (Esso): polybutylene
 8) Shell-Öl 4178 (Shell): naphthenic oil
 55 9) Irganox 1010 (Ciba-Geigy): antioxidant

Regarding claim 17, Taal et al. (col. 8, line 10-25) disclose that the peel strength value in N/5cm. Therefore, the peel strengths disclosed can be converted to N/m by a factor of 20. Therefore, the examiner has a reasonable basis that the claimed peel strength has been met by Taal et al. Regarding claimed "wet peel strength", applicants must recognize that the testing method disclosed in Taal et al. and the method employed for the "wet peel strength" involves a relative humidity of 50%, at an angle of 180 degree, and at a rate of 300 mm/minute. Therefore, the values disclosed in Taal et al. and the values as claimed can be properly compared.

Taal et al.	Applicants' test method (US 5,028,485, col. 4, line 20-38)
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<p>20 peel strength (so-called adhesion value) to DIN 53 330 using a Zwick type 1435 tensile tester at 20° C./50% relative humidity. The 50 mm wide sample is separated at a rate of 300 mm/min. at an angle of 180°. The peel strength is expressed in N.5cm⁻¹. The coating of the sample was measured at the earliest after 48 h the samples were stored for 4 h at 40° C.</p>	<p>A) 180° peel adhesion on wet hydrophilic viscose based non woven</p> <p>20 Samples are conditioned for 24 hours at 23° C. ± 2° C. at 50% relative humidity, prior to start testing. The standard test substrate (viscose based hydrophilic non woven operation drape) is applied to a stainless steel panel by means of a double coated tape. Test specimens</p> <p>25 of a hydrophobic viscose polyester based non woven coated with the pressure sensitive adhesive composition of the invention with a coating weight of 60 g/m² are cut out with dimension 2,5 × 15 cm. The test specimens are laminated upon the hydrophilic non woven once in</p> <p>30 each direction with a 0,5 kg roller. After 30 min. an excess (minimal 2 ml per specimen) of distilled water is added over the whole length at one side of the adhesive tape, and the water is allowed to penetrate underneath the adhesive tape to the other side. After 5 min. dwell</p> <p>35 the adhesive tape is peeled off from the non woven under an angle of 180° with a tensile tester at a speed of 300 mm/min. The average peel off value is recorded in N/m.</p>
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The difference between the invention of claims 11-17, 20-24 and Taal et al. is that Taal et al. do not teach an adhesive composition comprising sulfonated copolyester.

Wang (abstract; col. 1, line 5-22; col. 3, line 36 to col. 4, line 17) disclose a water-sensitive hot melt adhesive composition based on about 10% to about 90% by weight of one or more sulfonated polyester copolymer(s), and a broad range composition of plasticizer(s), tackifier(s), and stabilizer(s). Regarding the claimed elastomeric block copolymer, Wang (col. 17-18, claims 5-6) clearly teach elastomeric block copolymers having a melting pointer greater than 50°C (solid at room temperature). Regarding claim 24, Wang (col. 6, line 66 to col. 7, line 6) clearly disclose the use of multifunctional

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monomers for preparing the taught sulfonated polyesters. Therefore, the examiner has a reasonable basis that the claimed “branched” feature is inherently possessed in Wang. In view of the substantially identical field of endeavor of Taal et al. and Wang, and motivated by the expectation of success of developing an adhesive composition having the advantages of water-solubility, water-dispersibility, water releasability and repulpability (Wang, col. 1, line 9-22), it would have been obvious to one of ordinary skill in art to incorporate the sulfonated polyester copolymer(s) teachings into Taal et al. to obtain the invention of claims 11-17, 20-24.

Regarding claims 22-23, Wang (col. 1, line 23-46) disclose various applications that meet the features of claims 22-23. In view of the substantially identical field of endeavor of Taal et al. and Wang, and motivated by the expectation of success of developing an adhesive composition having the advantages of water-solubility, water-dispersibility, water releasability and repulpability (Wang, col. 1, line 9-22), it would have been obvious to one of ordinary skill in art to incorporate the sulfonated polyester copolymer(s) teachings and their applications or products into Taal et al. to obtain the invention of claims 22-23.

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Hot melt adhesives typically exist as a solid mass at ambient temperature and can be converted to flowable liquid state by the application of heat. These adhesives are particularly useful in manufacturing of a variety of disposable goods where bonding of various substrates is often necessary. Specific applications have included disposable diapers, sanitary napkins, pantyshield, surgical drapes, hospital pads and adult incontinence briefs; collectively known as disposable nonwoven products. Other diversified applications have involved paper products, packaging materials, tapes and labels. In these applications, the hot melt adhesive is heated to the molten state and then applied to a substrate. A second substrate is immediately laminated to the first and the adhesive solidifies on cooling to form a strong bond. The major advantage of hot melt adhesives is the lack of a liquid carrier, as would be the case for water-based or solvent based adhesives, thereby eliminating the costly drying step during application. Suitable hot melt adhesives must possess the appropriate bond strength to adhere the substrates involved, and must also possess adequate flexibility, staining or bleedthrough resistance, suitable viscosity and open time to function on commercial equipment, acceptable stability under storage conditions, and acceptable thermal stability under normal application temperature.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William K Cheung/
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.

Primary Examiner

May 25, 2008